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10/23/2003

James A. Vanek

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ROBERT D. VARITZ, P.C.

4915 S.E. 33RD PLACE

PORTLAND, OR 97202

EXAMINER

SOOHOO, TONY GLEN

ART UNIT

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/692,402
Filing Date: October 23, 2003
Appellant(s): VANEK, JAMES A.

**MAILED
FEB 28 2007
GROUP 1700**

Robert Varitz
For Appellant

Supplemental EXAMINER'S ANSWER

This is in response to the appeal brief filed 11-13-2006 in replacement of the brief filed 08-30-2006 appealing from the Office action mailed 03/14/2006.

This Supplemental Examiner's Answer corrects the listing of the patent number enumerated in section (8) **Evidence Relied Upon**.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

3,223,389	SIMMONDS	12-1965
4,083,653	STIFFLER	4-1978
6,419,385	WALLS	7-2002

4,872,764

McCLEAN

10-1989

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

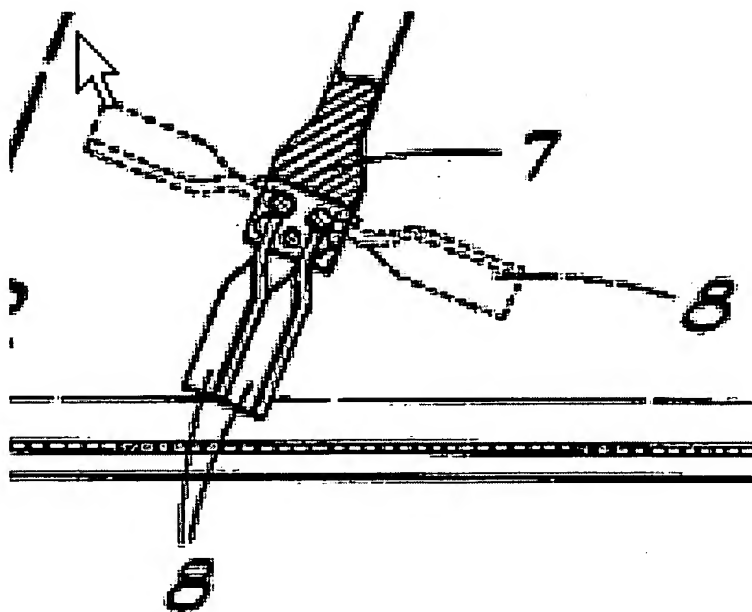
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmonds, (US Pat. No. 3,223,389).

The Simmonds US 3,223,389 reference teaches a shaft 6 with a free end at the top end of the shaft at 5, a mixer attachment end at 7, a hub head 7, a mixer assembly with two blades 8, 8 with each blade having a twist as seen in figure 1. The two blades 8,8 are deemed as a mixer assembly 8,8 and may be defined as a *blade set* which is integrally connected and formed fixedly to the hub 7 via a pin pivot point which provides a pivotal rotation of the blade set 8,8 from the collapsed condition, to a rotated condition, when operated in a rotation or counter rotation of the shaft. This pivotal rotation of the blade set provides a *flexible blade set* (emphasis added) as interpreted by the examiner of the scope of the claimed language of claims 1,7,and 8. This reading of the scope is inclusive of *all embodiments* of appellant's figures 1-9. The pivot point

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provides a flexing of each blade of the blade set from a collapsed condition to the



rotated extended condition.

It is noted that a twisted blade section shown in the blades 8, 8, of Figure 1 of the Simmonds reference would operate, during its rotation in the fluid, with the physics of producing a fluid reactive force upon the pivoted blade set. The fluid reactive force would urge the blade set 8, 8 to pivot upwards and outwards when rotated in one direction. When the pivoted blade set 8, 8 is rotated in a counter direction, the fluid reaction would urge the blade set to pivot downwards and inwards together thereby collapsing the blades together.

The Simmonds US 3,223,389 reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of the *blade set* being a *polymer* blade set.

The use of polymer plastic material is old and well known for the characteristics of ease of cleaning, and lower cost of manufacture, accordingly, it is deemed that it

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would have been obvious to one of ordinary skill in the art to substitute for the material used by the Simmonds reference with a polymer material in the make up of the blade set so that the blade set surface is easily cleaned and the manufacture costs are lowered, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. It is also further noted that if the blade set is made of a polymer material,

With regards to number of four versus two blades as shown in the Simmonds reference. The blades of Simmonds produces an effect of fluid agitation. Since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. (St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.), it is deemed it is deemed that it would have been obvious to one of ordinary skill in the art to provide additional blades to the Simmonds device in order to provide additional blending effect.

Claims 6, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmonds (U.S. Pat. No. 3,223,389) in view of Stiffler (U.S. Pat. No. 4,083,653) and Walls (U.S. Pat. No. 6,419,385).

The Simmonds US 3,223,389 reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of a reduced diameter section on the shaft to provide coupling of the end of the shaft to a removable power motor, and further having a polymer blade set made of PVC material.

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The reference to Stiffler US 4,083,653 teaches that in the environment of an collapsible bladed agitator with a central shaft (12) which may be attached to a removable drive motor (36) by the use of a reduced diameter section as respectively seen in figure 4 at the right side of the shaft 12.

In view of the teaching by Stiffler US 4,083,653 it is deemed that it would have been obvious to one of ordinary skill in the art to modify the end of the shaft of the Simmonds 3223389 shaft with a reduced portion such that the shaft may be more easily attached to a removable motor drive.

With regards to the teaching of the use of PVC as a mixer blade material, the reference to Walls US 6,419,385 discloses that a mixer blade may be formed from PVC, column 3, lines 56-60. Thus, this is an evidence of a finding of fact that the use of polymer plastic material is old and well known in the use of mixer blades and whereas plastics are known for the characteristics of ease of cleaning, and lower cost of manufacture, accordingly, it is deemed that it would have been obvious to one of ordinary skill in the art to substitute for the material used by the Simmonds reference with a polymer PVC blade so that the blade is easily cleaned and the manufacture costs are lowered, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 6, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmonds (U.S. Pat. No. 3,223,389) in view of McClean (U.S. Pat. No. 4,872,764) and Walls (U.S. Pat. No. 6,419,385).

Simmonds US 3,223,389 discloses all of the recited subject matter as defined within the scope of the claims with the exception of a reduced diameter shaft section to provide a coupling of the shaft end to a removable power motor, and further having a blade made of polymer PVC material.

The reference to McClean US 4,872,764 teaches that in the environment of an collapsible bladed agitator with a central shaft (21) one may attach a removable drive motor (15) at a reduced diameter section shaft as respectively seen in figures 3 of McClean.

In view of the teaching by McClean US 4,872,764, it is deemed that it would have been obvious to one of ordinary skill in the art to modify the end of the shaft of the Simmonds 3223389 shaft with a reduced portion such that the shaft may be more easily attached to a removable motor drive.

With regards to the teaching of the use of PVC as a mixer blade material, the reference to Walls US 6,419,385 discloses that a mixer blade may be formed from PVC, column 3, lines 56-60. Thus, this is a evidence of a finding of fact that the use of polymer plastic material is old and well known in the use of mixer blades and whereas plastics are known for the characteristics of ease of cleaning, and lower cost of manufacture, accordingly, it is deemed that it would have been obvious to one of ordinary skill in the art to substitute for the material used by the Simmonds reference

with a polymer PVC blade so that the blade is easily cleaned and the manufacture costs are lowered, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

(10) Response to Argument

Ground A:

Appellant appears to assert that the claims require “a flexible blade”

On page 5, line 17, and on page 6, lines 2-4 of the appeal brief, Appellant appears to be asserting that the Simmonds reference does not teach or suggest the provision of a flexible blade(s). The examiner respectfully disagrees. Appellant appears to assert the claims require that the blade structure must bend and flex upon itself, or that the blade is made of a material which bends and flexes. Appellant points to the embodiment of figure 9 as support of such an interpretation.

Appellant is reminded that the language of the claims define the invention. In contrast to appellant’s assertion, the term “flexible” modifies the phrase “blade set” and not to a “blade” element.

The claims require:

In claim 1, “said mixer assembly includes a flexible polymer blade set”;

In claim 8, “said mixer assembly includes a flexible polymer blade set”;

In claim 13 “said mixer assembly includes a flexible PVC polymer blade set”.

In claim 13 “said mixer assembly includes a flexible PVC polymer blade set”.

The instant phrase of the claim has been read and interpreted by the examiner as requiring a blade set in which the “blade set” is flexible to extend and collapse upon a pivot point connected to the shaft. Additionally, phrase further requires that the *blade set* is made of a polymer (or PVC polymer) material. Appellant appears to understand the examiner’s interpretation of the term “flexible” in the statement in the appeal brief on page 6, lines 2-3, “The blades [i.e. blade set of Simmonds] may be considered to flex *relative to the shaft* ... (italics in the original)”. Whereas the claim and the specification fails to clearly define what constitutes a “flexible” blade set, this interpretation as applied to appellant’s claims. This interpretation is broadly consistent with appellant’s specification and is readable upon all of embodiments in the specification, inclusive of the figures 1-8 and not only to figure 9.

During patent examination, the pending claims must be “given their broadest reasonable interpretation consistent with the specification.” The Federal Circuit’s en banc decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the “broadest reasonable interpretation” standard: The Patent and Trademark Office (“PTO”) determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction “in light of the specification as it would be interpreted by one of ordinary skill in the art.” *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004).

Indeed, the rules of the PTO require that application claims must “conform to the invention as set forth in the remainder of the specification and the terms and phrases

used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1). A reading of the specification reveals that the term "flexible" has not been defined, thus has been afforded its broadest reasonable interpretation to the blade set.

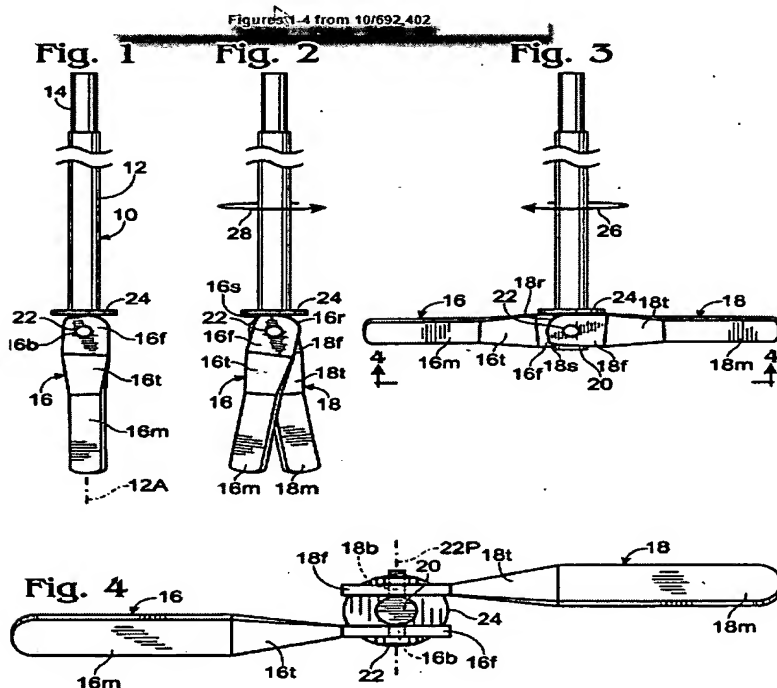
Appellant's discussion of the claimed subject matter has been directed only to the embodiment of figure 9. A complete record should include the identification of the corresponding subject matter readable upon the additional embodiment(s) as shown in figures 1-8.

The invention is directed to "collapsible mixing wand" (Specification page 3, line 10) whereby, there is provided a shaft 12 (Specification page 3, line 11), and a mixer assembly 16, 18 at one end of the shaft. The specification defines a "mixer assembly" (Specification page 3, lines 17-18) as "[a] pair of elongate blades 16, 18, referred to herein as a mixer assembly, are rotatably fixed to other, or mixer attachment, end 20 of shaft 12." (*italics added*). The mixer assembly also includes a "fixing mechanism" 22 which is preferably a nut-and bolt, or other forms such as rivets, which provides a pivot point 22P in which the blades 16 and 18 (the mixer assembly) may freely rotate about the fixing mechanism 22. (Specification page 3, lines 18-22, and Specification page 4, lines 14-16.)

Each blade 16, 18 of the mixer assembly is a blade set in which each blade has a twist between 16t and 16m, see figure 4 (Specification page 4, lines 1-4). The blade set may be formed of a "polymer material" (Specification page 6, line 13), or "PVC-type

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polymer" (Specification page 6, line 14). Additionally, four blades 16, 18, 34, 36, (Fig. 6 or Fig 9) may be provided. Also, the free end portion 14 may have a reduced diameter section at 14 to connect to a power head (a power drive). Finally, one may utilize the invention with a container in which the collapsible mixer wand may be placed into for mixing a fluid through a port in a lid. (Figures 7 and 8).

**Claim 1**

A collapsible mixing wand comprising:

an elongate shaft (12) having a longitudinal axis therealong, a free end (14, Fig. 1) and a mixer attachment end (20);

a mixer assembly (16, 18) (Specification page 3, lines 17-18) attached to said elongate shaft at the mixer attachment end thereof by

a fixing mechanism (22) (Specification page 3, lines 18-21), for rotation relative to said longitudinal axis, wherein said mixer assembly includes

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a **flexible polymer blade set (16, 18)** having plural, integrally formed blades, and wherein each blade has

a **twist (16m, 16t, 18m, 18t)** intermediate an attachment end which is attached to a

blade set hub (at 22, 24) and a free end (at the end of 16m, 16m);

wherein, when said elongate shaft is rotated in a first direction, said mixer assembly rotates to an extended condition; and when said elongate shaft rotates in a second direction, said mixer assembly rotates to a substantially collapsed condition.

Claim 8

A **collapsible mixing wand** comprising:

an **elongate shaft (12)** having a longitudinal axis therealong, a free end (figure 6 at right of 12) and a mixer attachment end (at the lower left end of 12);

a **mixer assembly (16, 18, 34, 36)** attached to said elongate shaft (12) at the mixer attachment end thereof by

a **fixing mechanism (22)**, for rotation relative to said longitudinal axis, wherein said mixer assembly includes

a **flexible polymer blade set (16, 18, 34, 36 or 58, 60, 62, 64)** having plural, integrally formed blades,

wherein said mixing assembly includes

a **least four elongate blades (16, 18, 34, 36 or 58, 60, 62, 64)** having

a **twist (16m, 16t, 18m, 18t)** intermediate the ends thereof, disposed on said mixer attachment end (lower portion of shaft 12, figure 6);

wherein, when said elongate shaft is rotated in a first direction, said mixer assembly rotates to an extended condition; and when said elongate shaft rotates in a second direction, said mixer assembly rotates to a substantially collapsed condition.

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Claim 13

A **collapsible mixing wand** (figures 7 and 8) for mixing material in a container, the container (40) having a lid (42) with an industry standard pour spout (44),

comprising:

an **elongate shaft (12)** having a longitudinal axis therealong, a free end having a **reduced diameter portion (14)** (figure 1) for attachment of a power head (46 Fig. 8), and a mixer attachment end;

a **mixer assembly (16, 18)** (figure 7, 8) attached to said elongate shaft (12 at the mixer attachment end thereof by

a **fixing mechanism (22)**, for rotation relative to said longitudinal axis, and sized to clearance fit through an industry standard pour spout (44) (figure 7) when in a collapsed condition,

wherein said mixer assembly includes

a **flexible PVC polymer blade set (16, 18)** having plural, integrally formed blades, wherein each blade has

a **twist intermediate (16t, 18t, 16m, 18m)** an attachment end (at 22) which is attached to

a **blade set hub (at 22, 24)** and a **free end (end of 16m, 18m)**;

wherein, when said elongate shaft is rotated in a first direction, said mixer assembly rotates to an extended condition and exerts a downward force on the material in the container (40) (figure 7 and 8) located proximal to said mixing assembly; and when said elongate shaft rotates in a second direction, said mixer assembly rotates to a substantially collapsed condition.

Appellant appears to assert that the Simmonds reference does not teach a blade having a twist

On page 5, line 19, and line 22, Appellant's appears to assert that the Simmonds reference does not teach a blade having a twist. The examiner respectfully disagrees. The drawings and pictures can anticipate a claim(s) if they clearly show the structure which is claimed. In re Mraz, 455 F.2d 1069, 173 USPQ 25 (CCPA 1972). When the reference is a utility patent, it does not matter that the feature shown is unintended or unexplained in the specification. The drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art. In re Aslanian, 590 F.2d 911, 200 USPQ 500 (CCPA 1979). In this instance, the Simmonds reference shows a twist and pitch to the element 8 as shown in figure 1 and as discussed in column 2, line 21.

Appellant appears to assert that the Simmonds reference fails to provide a polymer material of the blade set.

On page 5, line 19, and line 22, Appellant's appears to assert that the Simmonds reference does not teach a blade which is made of a polymer material. The examiner respectfully disagrees. In response to appellant's arguments against the Simmonds reference, one cannot show nonobviousness by attacking references individually where the rejections are based on combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves *or in the knowledge generally available to one of ordinary skill in the art*. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

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1986). See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the state of general knowledge of the art and motivation to the advantages of polymer plastic as a material to construct devices has been long established. The commonly known advantages of the use of polymer material for ease of cleaning, and lower cost of manufacture, is notoriously old and well known. Furthermore, the particular utilization of PVC polymer plastic in the construction of mixing blades was shown the Walls (U.S. Pat. No. 6,419,385) reference. Since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice, (*In re Leshin*, 125 USPQ 416), it is deemed that the issues of common knowledge and motivation to modify the material of the blade set to a polymer material has been fully established in the obviousness rejection.

Appellant appears to assert that claim 7 and claim 8 are allowable for the reasons set for the in connection with claim 1.

On page 6, lines 9-11, appellant appears to assert that the claims are allowable for the reasons set for with the parent claim 1. The examiner respectfully disagrees for the same reasons discussed above with regards to claim 1.

Ground B:

Appellant appears to assert that claim 6 and claim 11 are allowable for the reasons set for the in connection with claim 1.

On page 6, lines 15-16, appellant appears to assert that the claims are allowable for the reasons set forth with the parent claim 1 and stand or fall together with the parent claims 1 and 8. The examiner respectfully disagrees for the same reasons discussed above with regards to claim 1.

Appellant appears to assert that claim 13 is allowable for the reason that the combination of Simmonds in view of Stiffler and Walls does not result in a mixer wand having a PVC polymer mixer assembly with integrally formed blades, each blade having a twist intermediate the attachment end, an elongate shaft, a mixer attachment end, a fixing mechanism, a blade set hub, and a free end.

The examiner respectfully disagrees. On page 7, lines 2-3 appellant asserts that the Stiffler reference is similar to Simmonds except that 1) the mixing blades are perforated, and 2) the blades have a twist between the ends. On page 7, lines 4-11, appellant asserts that the Walls reference 1) is not used to fit through an industry standard spout, 2) has metal or PVC blades, and 3) the blades are not flexible as that term defined and used by appellant. On page 7, lines 12-16, appellant asserts that Simmons reference does not teach or suggest the provision of 1) a flexible blade, 2) a blade having a twist intermediate the ends thereof. Appellant also asserts that the rotation of the Simmonds reference differs from "the clear meaning of flexible" as used by appellant and is missing from the Simmonds and Stiffler references. With regards to the piecemeal analysis of the Stiffler, Walls, and Simmonds references, the examiner respectfully disagrees with such a characterization of the teachings of prior art.

The examiner respectfully disagrees with the assertion that the combination of the references of Simmonds, Stiffler, and Walls is a Examiner-concocted combination and would produce a mixer as stated on page 7, lines 16-19. The test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

The Stiffler reference establishes as a finding of fact that one may attach to a removable drive motor by a reduced diameter section in the mixer shaft. The Stiffer reference is utilized in the perfection of the connective structure of the mixer shaft to a drive motor and not to the perforation of the blades as asserted by appellant.

In similar fashion, the Walls reference is utilized in the perfection of the blade set material construction. The Walls reference teaches an alternate construction material to a mixer blade as acknowledged by appellant on page 7, line 5, to a unitization of metal or PVC blades.

With regards to the characterization of the Simmons reference, the "flexible blades" has been discussed in detail in the Ground A discussion, above. It is respectfully submitted that an application of a combination of the Stiffer reference as a teaching to the modification to the shaft diameter to the Simmonds device, and a teaching to the modification of the blade set material by the Walls reference as applied to the Simmonds device would render the claims as being obvious.

Ground C:

Appellant appears to assert that claim 6 and claim 11 are allowable for the reasons set for the in connection with claim 1.

On page 8, lines 7-8, appellant appears to assert that the claims are allowable for the reasons set for with the parent claim 1 and stand or fall together with the parent claims 1 and 8. The examiner respectfully disagrees for the same reasons discussed above with regards to claim 1.

Appellant appears to assert that the remaining claim 13 is allowable for the reason that the combination of Simmonds in view of McClean and Walls does not result in a mixer wand having a PVC polymer mixer assembly with integrally formed blades, each blade having a twist intermediate the attachment end, an elongate shaft, a mixer attachment end, a fixing mechanism, a blade set hub, and a free end.

The examiner respectfully disagrees. On page 8, line 15 appellant asserts that the Stiffler reference is similar to Simmonds. On page 8, lines 17 through page 9, line 2, appellant asserts that the Walls reference 1) is not used to fit through an industry standard spout, 2) has metal or PVC blades, and 3) the blades are not flexible as that term defined and used by appellant. On page 9, lines 2-5, appellant asserts that the rotation of the Simmonds reference blade set is not "the clear meaning of flexible" as used by appellant, and is also missing from the Simmonds and Stiffler references.

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With regards to the piecemeal analysis of the Stiffler, Walls, and Simmonds references, the examiner respectfully disagrees with such a characterization of the prior art.

The examiner respectfully disagrees with the assertion that the combination of the references of Simmonds, Stiffler, and Walls is a Examiner-concocted combination and would produce a mixer as stated on page 9, lines 6-13. The test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

The Stiffler reference establishes as a finding of fact that, within an environment of an collapsible agitator blade and a central shaft, one may attach a mixer shaft to a removable drive motor by a reduced diameter section in the shaft. The Stiffer reference is utilized in the perfection of the connective structure of the shaft diameter to a drive motor of the Simmonds reference, and not to the perforation of the blades as asserted by appellant.

In similar fashion, the Walls reference is utilized in the perfection of the blade set material construction. The Walls reference teaches an alternate construction material to a mixer blade as acknowledged by appellant on page 7, line 5, to a unitization of metal or PVC blades.

With regards to the characterization of the Simmons reference, the "flexible blades" has been discussed in detail in the Ground A discussion, above.

It is respectfully submitted that an application of a combination of the McClean reference as a teaching to the modification to the shaft diameter to the Simmonds

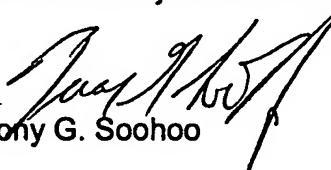
device, and a teaching to the modification of the blade set material by the Walls reference as applied to the Simmonds device would render the claims as being obvious.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Tony G. Soohoo
Patent Examiner

Conferees:


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

W.L. Walker


JENNIFER MICHENER
QUALITY ASSURANCE SPECIALIST

Jennifer Michener